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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,588	02/02/2000	Manabu Hyodo	0879-0253P	6457

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EXAMINER

HENN, TIMOTHY J

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/06/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/496,588

Applicant(s)

HYODO ET AL.

Examiner

Timothy J Henn

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-8 and 11-16 is/are allowed.
- 6) ☒ Claim(s) 1,2,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on May 3, 2004 overcomes the previous objections to the specification, these objections are therefore withdrawn.

### ***Response to Arguments***

2. Applicant's arguments, see pages 22-26 of the amendment in paper number 6, filed on May 3, 2004, with respect to the rejection(s) of claim(s) 1, 2, 9 and 10 under 35 U.S.C. §103(a) over Miyano in view of Okino or Miyano in view of Okino in further view of Tsujimoto have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference Miyano (US 6,727,942).

Miyano discloses an automatic white balance apparatus which sorts a plurality of blocks into fluorescent, tungsten and daylight blocks based upon color distribution range determination frames. Miyano further discloses the alteration of the block values and weightings used when determining amplifier gains for the color channels based upon the likelihood that a light source is illuminating the scene (i.e. determining a light source). The likelihood that a light source is illuminating the scene is based upon the subject brightness (i.e. luminance; c. 11, ll. 13-23) and the number of blocks of the image that belong to certain color distribution ranges (c. 11, ll. 47-57).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyano (US 6,727,942).

**[claim 9]**

In regard to claim 9, note that Miyano discloses an automatic white balance adjustment apparatus (Figures 1A and 1B), comprising: a luminance level determining device that determines a luminance level of the subject (e.g. Figure 1B, Item 24; c. 11, ll. 13-46; c.12, l. 59 - c. 13, l. 5; c. 13, l. 56 - c. 14, l. 2); an image plane dividing device that divides an image plane, on which the subject is imaged into a plurality of areas (Figure 1A, Item 10; c. 6, ll. 16-47); a color information acquiring device that acquires color information of each of the areas (Figure 1A, Item 10; c. 6, ll. 16-47); a determination frame setting device that sets at least on determination frame indicating at least a color distribution range of a light source (Figure 1A, Items 18, 20 and 22; Figures 4-6; c. 8, l. 40 - c. 9, l. 52); a number of areas finding device that finds a number of areas belonging to the determination frame in accordance with the color information of each of the areas acquired by the color information acquiring device (Figure 1A, Items 18, 20 and 22; c. 8, ll. 60-67; c. 9, ll. 19-25; c. 9, ll. 45-52); a light source

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determining device that determines a type of a light source with which the subject is illuminated according to the luminance level of the subject determined by the luminance level determining device and the number of areas belonging to the determination frame found by the number of areas finding device (e.g. Figure 1B, Item 24; c. 11, ll. 13-46; c.12, l. 59 - c. 13, l. 5; c. 13, l. 56 - c. 14, l. 2; The office notes that the average value modification unit determines based on a brightness or "luminance" and various block count values whether the image is likely to be illuminated by a certain light source, and varies the average values accordingly); and a white balance adjusting device that adjusts a white balance according to the type of the light source determined by the light source type determining device (Figure 1B, Item 28; c. 16, l. 63 - c. 17, l. 46).

**[claim 1]**

Claim 1 is a method claim corresponding to apparatus claim 9. Therefore, claim 1 is analyzed and rejected as previously discussed with respect to apparatus claim 9.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyano (US 6,727,942) in view of Tsujimoto (US 6,201,932).

**[claim 10]**

In regard to claim 10, note that Miyano discloses an automatic white balance device, which meets the requirements, set forth in claim 9 as discussed above. Therefore, it can be seen Miyano lacks a determination frame, which is specified by a range of the color information, which is a ratio R/G, and a ratio of B/G. However, it is well known in the art that ranges of ratios R/G and ratios B/G can be used to specify determination frames for the purposes of light source identification, one such example can be found in Tsujimoto (Figure 3). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a range of ratios R/G and ratios B/G for the determination frames of Miyano instead of the TI and TG frames to be able to use data which specifies ranges of R/G and B/G as determination frames without the need to convert the data to TI and TG ranges.

**[claim 2]**

Claim 2 is a method claim corresponding to apparatus claim 10. Therefore, claim 2 is analyzed and rejected as previously discussed with respect to apparatus claim 10.

***Allowable Subject Matter***

7. Claims 3-8 and 11-16 are allowed.

**[claims 3-8 and 11-16]**

In regard to claims 3-8 and 11-16, the prior art does not teach or fairly suggest an automatic white balance method which adjusts a white balance after classifying sections of a total image into blocks based upon a shade determination frame, wherein the

shade determination frame is restricted to areas of which luminance is not more than a predetermined luminance.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TUAN HO  
PRIMARY EXAMINER